

Algebra Review:

$$1) \quad y = mx + b$$

$$\frac{-mx \quad -mx}{y - mx = b}$$

$$2) \quad \cancel{x} \left(\frac{y}{\cancel{x}} \right) = \left(\frac{a}{b} \right) x$$

$$\left(\frac{b}{a} \right) y = \left(\frac{\cancel{a}}{\cancel{b}} \right) x \left(\frac{\cancel{b}}{\cancel{a}} \right)$$

$$\frac{by}{a} = x$$

$$\frac{y}{x} = \frac{a}{b}$$

$$\frac{yb}{a} = x$$

$$\frac{\text{Top Left}}{\text{Bottom Left}} = \frac{\text{Top Right}}{\text{Bottom Right}}$$

$$3) \quad \frac{y}{x} \stackrel{\text{red arrow}}{=} \frac{a}{b}$$

$$y = \frac{ax}{b}$$

$$4) \quad \frac{y}{x} \stackrel{\text{green arrow}}{=} \frac{a}{b}$$

$$\frac{\cancel{ax}}{\cancel{y}} \left(\frac{\cancel{y}}{\cancel{ax}} \right) = \left(\frac{1}{b} \right) \left(\frac{ax}{y} \right)$$

$$(b) \left(\frac{1}{\cancel{b}} \right) = \left(\frac{\cancel{1}}{\cancel{b}} \right) \left(\frac{ax}{y} \right) \cancel{b}$$

$$b = \frac{ax}{y}$$

$$\begin{array}{r}
 5) \quad \frac{y}{x} + \frac{b}{c} = a \\
 \underline{-\frac{y}{x} \qquad \qquad -\frac{y}{x}} \\
 \frac{b}{c} = \frac{a - \frac{y}{x}}{1}
 \end{array}$$

$$\frac{b}{a - \frac{y}{x}} = c$$